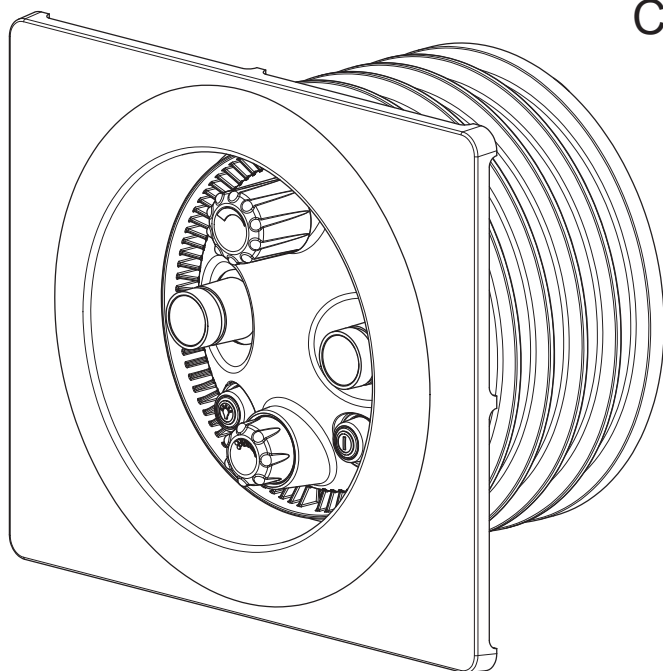


Installation, Operating, and Service Manual

BADU[®]JET super-sport *II* Counter Swimming Unit



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Safety

Safety is emphasized throughout the user manual. These are safety alert symbols (**CAUTION**, **WARNING**, and **DANGER**). They alert the user of potential personal injury hazards. Obey all safety messages to avoid possible injury or death or damage to equipment.

Date of Installation:	
Installed by:	
Serial Number:	
For Service Call:	

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BaduJet super-sport II Certifications



VGB 2008

1 Important Safety Instructions

WARNING: Before Installing this product, read and follow all warning notices and instructions which are included. Failure to follow safety warnings and instructions can result in severe injury, death, or property damage. Call (800) 223-8538 or visit www.usa.speck-pumps.com for additional copies of these instructions.

Swim Jet Combination Fitting - Manufacturers Warnings

Attention Installer: This manual contains important information about installation, operation, and safe use of this product. This information should be given to the owner and/or operator of this equipment. Most states and local codes regulate the construction, installation and operation of pools and spas. It is important to comply with these codes, many of which regulate the installation and use of this product.

1. **DO NOT** locate this fitting in seating areas or on the back rests for such seating areas.
2. This fitting should be vertically wall mounted only per manufacturer's instructions.
3. All fittings and fasteners should be examined for damage or tampering before each use.
4. Any missing, broken, or cracked fittings must be replaced before using this product. Only genuine Speck replacement parts may be used.
5. Acceptable fittings/pipe sizes are listed on page 9 of this manual. No other sizes are permitted.
6. Never exceed the maximum flow rate stated on this product.
7. The anti-entrapment cover must be in place when using this product. **DO NOT** use this product if the cover is missing, broke or loose.
8. The anti-entrapment cover (part# 93) should be replaced within 10 installed years.
9. Installation requires a Phillips screw driver. All screws should be hand tight only. **DO NOT** use electrical or air drills.
10. Consult your physician before exercising with the BaduJet Imperial or using the massage hose.
11. **DO NOT** permit children to use this product unless they are closely supervised at all times.
12. **DO NOT** remove any safety alert labels such as **DANGER**, **WARNING**, or **CAUTION**. Keep safety alert labels in good condition and replace missing or damaged labels.
13. Stay alert, watch what you are doing and use common sense. **DO NOT** use unit if you are tired and/or exhausted. **DO NOT** use unit while under the influence of drugs, alcohol, or any medications.
14. **CAUTION: DO NOT** increase pump size; this will increase the flow rate through the system and exceed the maximum flow rate stated on this product.

IMPROPER INSTALLATION OR USE OF THIS PRODUCT MAY PRESENT A RISK OF HAIR OR BODY ENTRAPMENT AND DROWNING.

INSTALL THIS EQUIPMENT IN ACCORDANCE WITH THE INSTRUCTIONS PROVIDED.

Swim Jet Combination Fitting - Manufacturers Warnings - continued

As the manufacturer, Speck Pumps - Pool Products, Inc., hereby certifies that their Swim Jet Combination Fitting meets or exceeds the requirements of the Virginia Graeme Baker Pool & Spa Safety Act, VGB 2008 and ANSI/APSP 16 standards and safety regulations as set forth by the Consumer Products Safety Commission.

“Read, and then keep these instructions for future reference”

General Safety Instructions

The following guidelines provide information to minimize the risk of injury to users of pools, spas, and hot tubs.

WARNING: TO REDUCE THE RISK OF ENTRAPMENT HAZARD



Pool and spa pumps produce high levels of suction, which can pose extreme danger if a person comes in close proximity to an open pool or spa drain or if a drain cover is loose, cracked, broken or missing. Pool and spa pumps move large volumes of water, which can pose extreme danger if a person's hair comes in close proximity to a drain that is not the proper size for the pump or pumps.

If not an approved single, unblockable outlet, a minimum of two functioning suction outlets per pump must be installed. Suction outlets in the same plane (i.e. floor or wall) must be installed a minimum of three (3) feet (1 meter) apart, as measured from center point to center point. Dual suction fittings shall not be located on seating areas or on the backrest for such seating areas. If any suction outlets are located closer they shall be located on two different planes (i.e. one on the bottom and one on the vertical wall, or one each on two separate vertical walls).

WARNING: *Failure to keep suction outlet components clear of debris, such as leaves, dirt, hair, paper and other material can result in an increased potential for suction entrapment.*

If not a single, unblockable outlet, in the event of one suction outlet being completely blocked, the remaining suction outlets serving the system shall have a flow rating capable of the full flow of the pump(s) or the specific suction system. If in doubt about the rating and/or head loss curve of your system, consult a qualified pool or spa professional and/or your respective equipment manufacturer(s). Also, double check with your local building/health authorities regarding single vs. multiple drain installations, etc.

Regularly inspect all drain covers for cracks, damage and advanced weathering. If a drain cover becomes loose, cracked, damaged, broken or is missing, close the pool or spa immediately, post a notice and keep the pool or spa closed until an appropriate VGB 2008 certified drain cover is properly installed.

WATER VELOCITY AND FLOW RATES

The maximum water velocity through drain covers is limited by some local regulations, for example some state health departments limit the velocity through public pool drain covers to 1.5 feet per second. This velocity limit is lower than the flow rating provided by the ANSI/APSP 16 certification; therefore local limit applies and must be followed. Never exceed the flow rating listed on the cover even if local code does not provide a velocity limit.

For additional information on proper installation refer to The Association of Pool & Spa Professionals ANSI/APSP-7 Standard and the US Consumer Product Safety Commission Guidelines for Entrapment Hazard.

General Safety Instructions - continued

VGB Compliance - VIRGINIA GRAEME BAKER POOL AND SPA SAFETY ACT

The Virginia Graeme Baker Pool and Spa Safety Act raises certain new requirements on owners and operators of swimming pools and spas.

Pools or spas constructed on or after December 19, 2008, shall utilize:

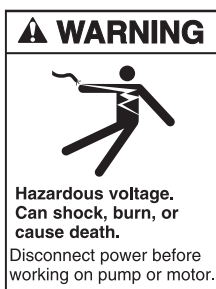
- (A) No submerged suction outlets, a gravity drainage system with ANSI/APSP compliant cover(s), one or more unblockable outlets; or
- (B) A multiple main drain system without isolation capability with suction outlet covers that meet ANSI/APSP 16-2011 Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs and either:
 - (i) A safety vacuum release system (SVRS) meeting ASME/ANSI A112.19.17 Manufactured Safety Vacuum Release Systems (SVRS) for Residential and Commercial Swimming Pool, Spa, Hot Tub, and Wading Pool Suction Systems and/or ASTM F2387 Standard Specification for Manufactured Safety Vacuum Release Systems (SVRS) for Swimming Pools, Spas and Hot Tubs or
 - (ii) A properly designed and tested suction-limiting vent system or
 - (iii) An automatic pump shut-off system.

Pools and spas construction prior to December 19, 2008, with a single submerged suction outlet shall use a suction outlet cover that meets ANSI/APSP 16-2011 and either:

- (A) A multiple main drain system without isolation capability, or a single (VGB 2008 compliant) unblockable or
- (B) A safety vacuum release system (SVRS) meeting ASME/ANSI A112.19.17 and/or ASTM F2387, or
- (C) A properly designed and tested suction-limiting vent system, or
- (D) An automatic pump shut-off system, or
- (E) Disabled submerged outlets, or
- (F) Suction outlets shall be reconfigured into return inlets.

For more information about the Virginia Graeme Baker Pool and Spa Safety Act, contact the Consumer Product Safety Commission at (301) 504-7908 or visit www.cpsc.gov.

WARNING: *Risk of Electrical Shock or Electrocution*



Pool pump must be installed by a licensed or certified electrician or a qualified pool serviceman in accordance with the National Electrical Code and all applicable local codes and ordinances. Improper installation will create an electric hazard which could result in death or serious injury to pool users, installers, or others due to electrical shock, and may also cause damage to property.

Always disconnect power to the pool pump at the circuit breaker before servicing the pump. Failure to do so could result in death or serious injury to serviceman, pool users, or others due to electric shock.

2 General Description

The BaduJet super-sport II from Speck Pumps has been designed to be installed during the construction of your pool to create a water treadmill for anyone wanting a therapeutic and effective exercise. The BaduJet super-sport II can be installed in any type of pool, large or small, from gunite to vinyl liner. The self-contained, flush-mounted unit is a jet-propulsion system that pumps water into the pool creating a current in excess of 5,700 gallons per minute from a recessed jet housing. Topping off the experience is the pulsating massage hose which can be attached to the jet nozzles for easy and convenient massage treatments for joints and muscles.

3 Installation Information

Preparation Guide

1. Upon receipt of the swimjet system, check the cartons for damage. Open each carton and check the pump, jet housing, and control box for concealed damage, such as cracks, dents, or a bent base. If damage is found, contact the shipper or distributor where the swimjet was purchased.

2. Inspect the contents of each carton and verify that all parts are included. All parts are manufactured of corrosion-resistant material and combined in one housing which can be installed in pools of any size and shape. (See Figure 1)

A. Flush mounted jet housing.

B. Rectangular, anti-entrapment cover (20" x 17") for undetectable pump suction.

C. Jet nozzles.

D. Water volume control knob adjusts amount of water leaving jet nozzles.

E. Light (ON/OFF) pneumatic button turns low voltage light ON/OFF and guarantees complete electrical separation between pool water, pump motor, and control box.

F. Air regulator adjusts the amount of air bubbles in water flow.

G. Pump (ON/OFF) pneumatic button guarantees complete electrical separation between pool water, pump motor and control box.

H. Control Box with GFCI, pneumatic switches, and tubing.

I. Speck 4 HP self-priming, plastic pump, single phase with thermal overload (*no motor starter required*). Optional three phase motor and control box available. (*NOTE: Normal priming pump available for installation below water level.*)

J. Pulsating massage hose (5 ft.) may be attached to jet nozzle.

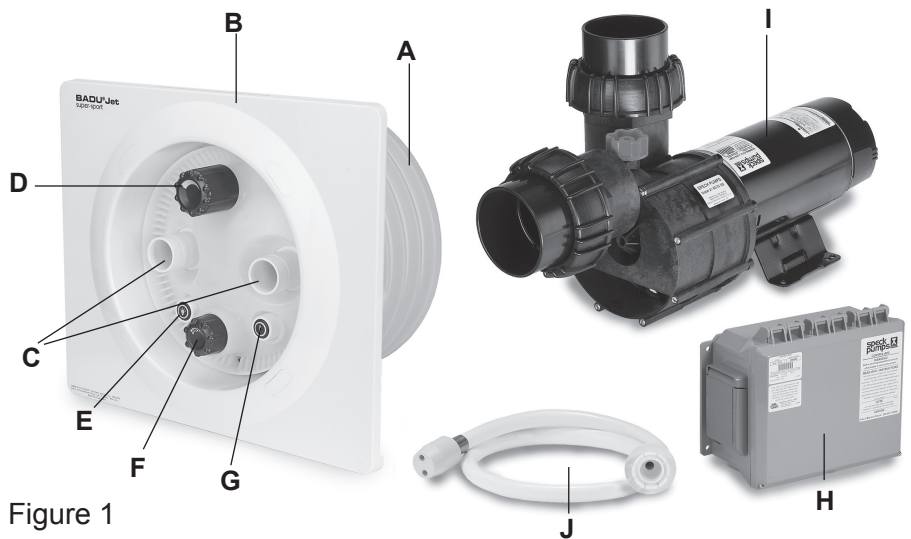


Figure 1

Planning

The BaduJet super-sport II is normally incorporated into the original pool design. However, it can be added to any pool at a later date. The BaduJet super-sport II can be installed in any size pool. We suggest a minimum pool size of 7 ft. wide, 14 ft. long and 3½ ft. deep in order to swim. Most swimmers prefer 16 ft. in length or longer. The extra length allows the swimmer to comfortably drift back and swim upstream. (*NOTE: This fitting should be vertically wall mounted only per these instructions. Failure to follow safety warnings and instructions can result in severe injury, death, or property damage.*)

The BaduJet super-sport II is complete with a jet housing, 4 HP pump, control box, and massage hose. Locate pump as close to the BaduJet super-sport II as practical. *Consult local codes for minimum distance between pump and pool.*

Planning - continued

In order to increase the pump's service life, provide simple weather protection. Install the pump on a solid foundation which provides a rigid and vibration-free support so that it is easily accessible for service and maintenance. Install the pump in a well ventilated location protected from direct sunlight and excessive moisture (rain, sprinklers, etc.). Provide access for future services by leaving a clear area around the pump.

WARNING: DO NOT locate the jet housing in seating areas or on the back rests for such seating areas.

The 4 HP, self-priming, plastic pump has a single phase motor with thermal overload (*no motor starter required*). The 4 HP single phase motor draws a maximum of 19.4 amps @ 230V. The unit requires a minimum circuit of 30 amps. Install a 40 amp breaker to avoid nuisance tripping when pump is turned ON and OFF frequently. The starting current of the 4 HP motor can reach up to 6 times the running currents. (Three phase motor draws a maximum of 12.8 amps @ 230V and 6.4 amps @ 460V.)

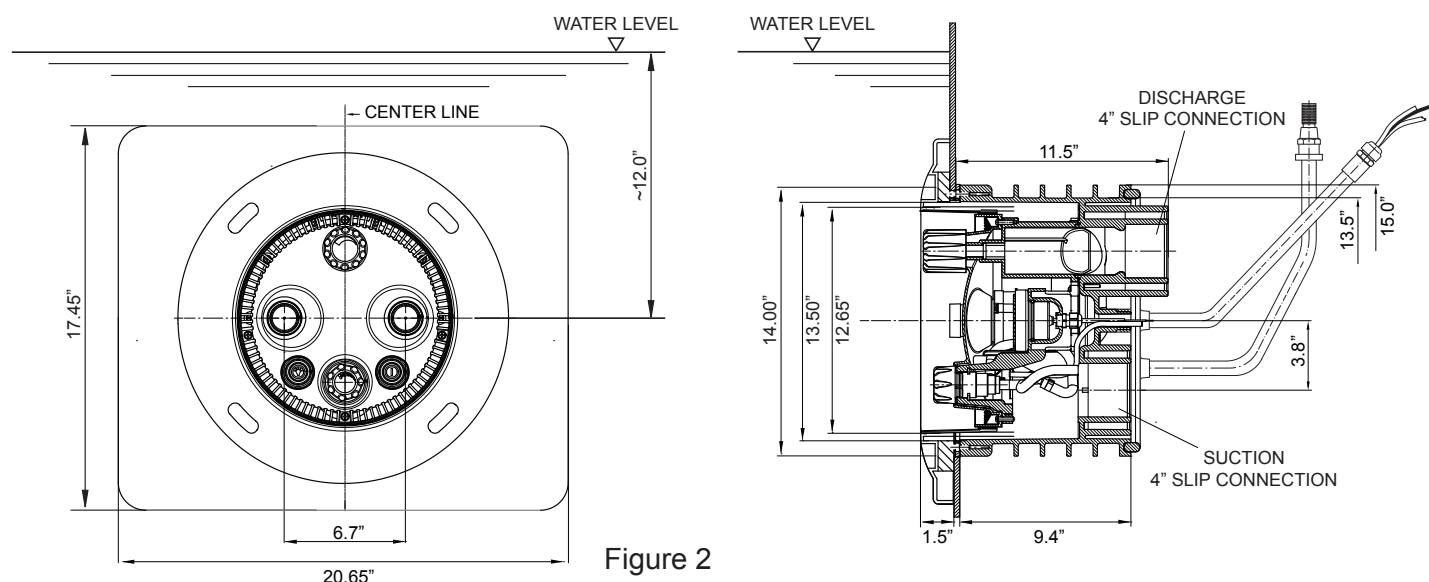
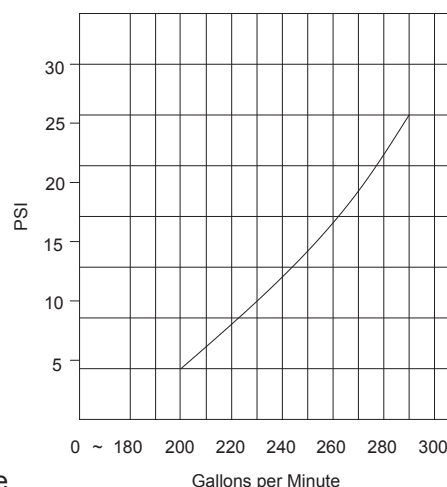


Figure 2
BaduJet Dimensional Drawing



SwimJet Combination Fitting Head Loss Curve

Plumbing

Use at least 4" pipe when the distance between the jet housing and pump is 30 ft. or less. For pipe runs longer than 30 ft., 6" pipe should be used for the entire run. The piping should be as direct and free from turns or bends as possible, as elbows and other fittings greatly increase friction losses. The BaduJet super-sport II assembly package contains all necessary parts for the installation of the unit into concrete, gunite, liner or fiberglass pools.

Plumbing - continued

Example: If you had 10 ft of straight 4" pipe, then a 4" 90, then another 10 ft. of pipe, your total feet of pipe would be 10' + 11.4" + 10' or 31.4' of pipe equivalent.

Fitting	4" Pipe	6" Pipe
90°	11.4	16.7
45°	5.1	8.0

Although other parameters come into play when it is a swimjet, the example is to demonstrate that multiple fittings can drastically affect the efficiency of your swimjet.

NOTE: 6" pipe will allow distances of well over 50 ft. However, control box needs to be within 50 ft. for the pneumatic ON/OFF buttons to function properly.

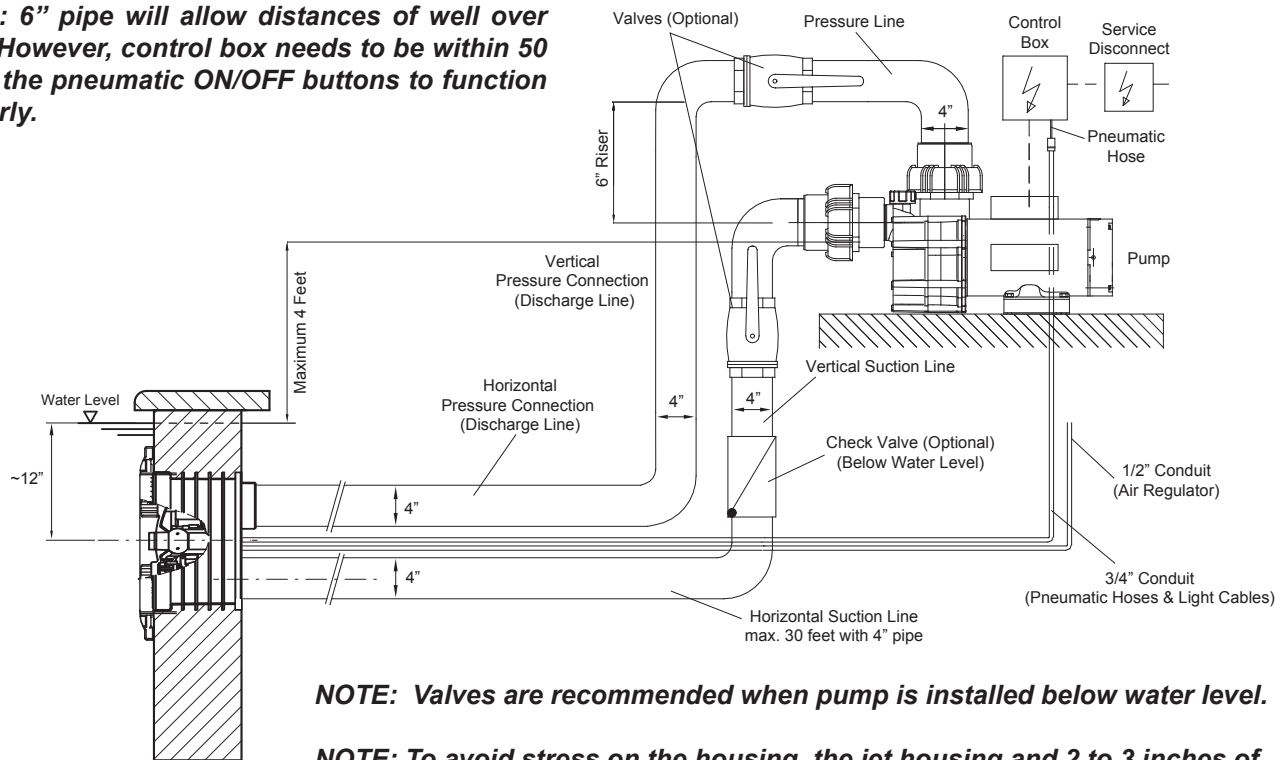


Figure 3

NOTE: Valves are recommended when pump is installed below water level.

NOTE: To avoid stress on the housing, the jet housing and 2 to 3 inches of plumbing/conduit stub out may be encased in gunite or concrete.

Suction lines which are too long have significant disadvantages:

- Higher resistance which results in less efficient priming and a higher risk of cavitation.
- Longer priming time (up to 12 min).
- Keep the suction and pressure line as short and straight as possible.
- Install valves in both the suction and pressure line.
- Avoid valves which close suddenly.

If the pump is positioned further away, then the pipe dimensioning has to be adapted so that almost loss-free flowing is ensured.

CAUTION: All necessary screws and bolts included with the BaduJet super-sport II are stainless steel. ALL screw threads and threaded inserts are METRIC! ONLY METRIC bolts and nuts may be used! All screws should be HAND TIGHT. DO NOT use drills or pneumatic tools. DO NOT over tighten!

CAUTION: The pressure connection must be located directly ABOVE the suction connection.

CAUTION: The suction line should run below water level right up to the pump location.

CAUTION: The center of the jet housing (the nozzles) should be 12" BELOW water level for maximum efficiency.

Plumbing - continued

CAUTION: *In areas with soft soil conditions or with frequent earth movement, a flexible section of 4" hose should be attached to the back of the jet housing to prevent housing breakage.*

CAUTION: *When connecting the pressure line into the pressure connection on top of the 4 HP pump Model 21-80, first install a 6" (15 cm) riser (See Figure 3) before installing an elbow and leading the pressure line downward to the pressure connection at the jet housing. This will guarantee trouble-free priming of the pump. (Not required for the 3.5 HP Model 72)*

CAUTION: *Observe at least 12 hours curing and bonding time. Non-observance of the curing and bonding time can result in leaks and flooding.*

CAUTION: *When using 6" pipe the suction line should run to a point directly under the pump and up to the water line in 6" and finish vertical and elbow into the pump in 4" to minimize priming time. (See Figure 3)*

CAUTION: **DO NOT** use the pump as a fixed point (support) for the pipe line.

CAUTION: *Throughout the entire installation, make sure the plumbing connected to the BaduJet super-sport II housing is well supported. Unsupported plumbing will crack the housing.*

New Concrete or Gunite Installation

1. If needed, Pre-plumb BaduJet super-sport II jet housing:

- Install approximately 12" of 4" SCH 40 pipe to both suction and pressure connections on the back of the jet housing. (NOTE: *If plumbing exceeds 30 ft. between the jet housing and pump, increase pipe size to 6". Install a 6" x 4" reducer coupling as close to the jet housing as possible.*)
- Install the air regulator hose and protective conduit to the back of the jet housing. (See Figure 10 and Step 1 in the Final Assembly section of this manual on page 16)

2. Create formwork for the jet housing using Figures 4 and 5:

- Drill the four (4) holes marked (1) in Figure 4 in the formwork for the inner pool wall. Cut a 14.5" hole in the formwork for the outer pool wall. **Notice that the center of the jet housing must be mounted 12" BELOW the water line as shown in the figures.**

3. Insert the round sealing cord (part# 25) in the groove on the back of the jet housing.

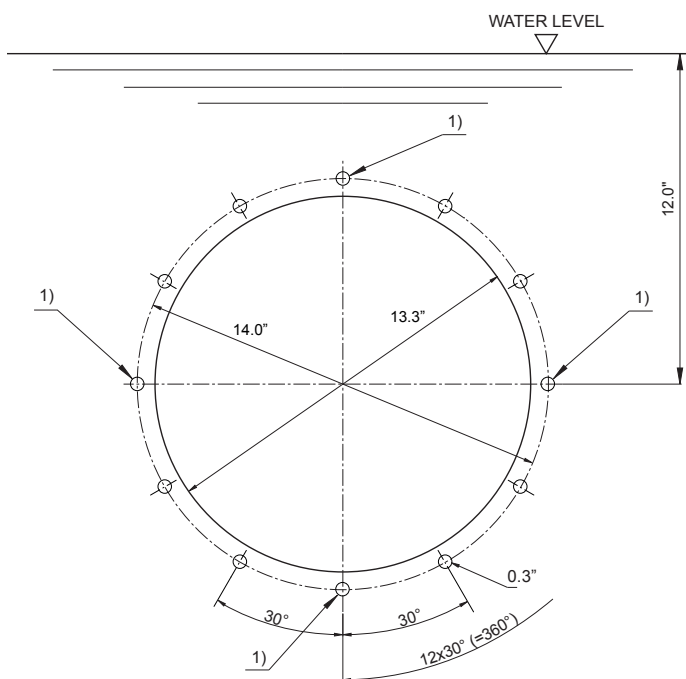
4. Place the jet housing between the steel rebar and against the hole in the outer wall formwork. Jet housing location is very important. (See Figure 5)

- Locate pressure connection directly **ABOVE** the suction connection.
- The center of the jet housing (the jet nozzles) must be 12" **BELOW** water level for maximum efficiency.

5. Mount the jet housing to the inner wall formwork and apply gunite or pour concrete:

- Install the four (4) M8 x 80 gunite cover studs (part# 31) in the front of the jet housing. They should be in the same position as the holes marked (1) in Figure 4. Insert gasket with knobs (part# 26), Slide the gunite cover (part# 30) over the studs.
- Tape the jet housing to keep concrete out of threaded inserts and out of the inside of the jet housing.
- Slide the inner wall formwork over the M8 x 80 studs (part# 31) using the pre-drilled holes. Attach formwork to the jet housing using four (4) 8.4mm washers (part# 32) and four (4) M8 nuts (part# 33).

New Concrete or Guniting Installation - continued



1) Fastening to the formwork (4x)

Figure 4
Installation Suggestion for concrete pools

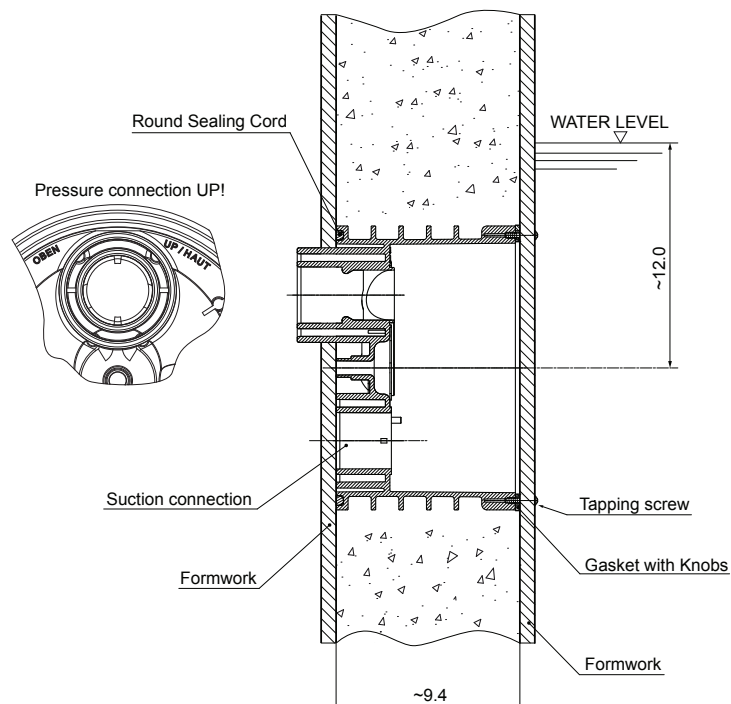


Figure 5
Installation formwork for concrete pools

- Front edge of the jet housing should finish even with the inside pool wall. Make sure a V shaped groove is scraped out around the housing approximately 1-1/2" deep to allow marcite to seal against the housing.
- Recheck the location of the jet housing when concrete or guniting is being applied. Make sure the jet housing remains properly aligned and level.
- To avoid stress on the housing, the jet housing and 2 to 3 inches of plumbing/conduit stub out may be encased in guniting or concrete.

6. Keep all parts not being used in their original box. Store in a safe place until needed.

7. Once the concrete or guniting is fully cured and pool wall is completed, remove the formwork, guniting cover, gasket with knobs, and studs. Be sure that the front edge of the jet housing is flush with the inner pool wall. During plastering, the guniting cover (part# 30) should remain installed to the jet housing using the four (4) M8 x 80 studs (part# 31), four (4) 8.4mm washers (part# 32), and four (4) M8 nuts (part# 33).

8. Install the clamping ring (part# 28) based on your pool type:

- **Guniting wall (no tile or liner):** Align the clamping ring (part# 28) as shown in Figure 9. Using the twelve (12) M8 x 30 clamping ring screws (part# 52), attach the clamping ring to the jet housing.
- **Concrete pool with vinyl liner:** Use the template in Figure 4 to mark and drill the holes through the liner (twelve (12) M8 holes and center 14" hole). Insert the gasket with knobs in the front of the jet housing (part# 26). Install the liner with the holes aligned to the jet housing. Align the clamping ring (part# 28) as shown in Figure 9. Using the twelve (12) M8 x 30 clamping ring screws (part# 52), attach the clamping ring to the jet housing. (See Figure 6)
- **Tiled pool:** The tile thickness may be compensated with an additional clamping ring and longer clamping screws (optional parts). (See Figure 7)

New Concrete or Gunite Installation - continued

9. Continue to the Final Assembly Section on page 16.

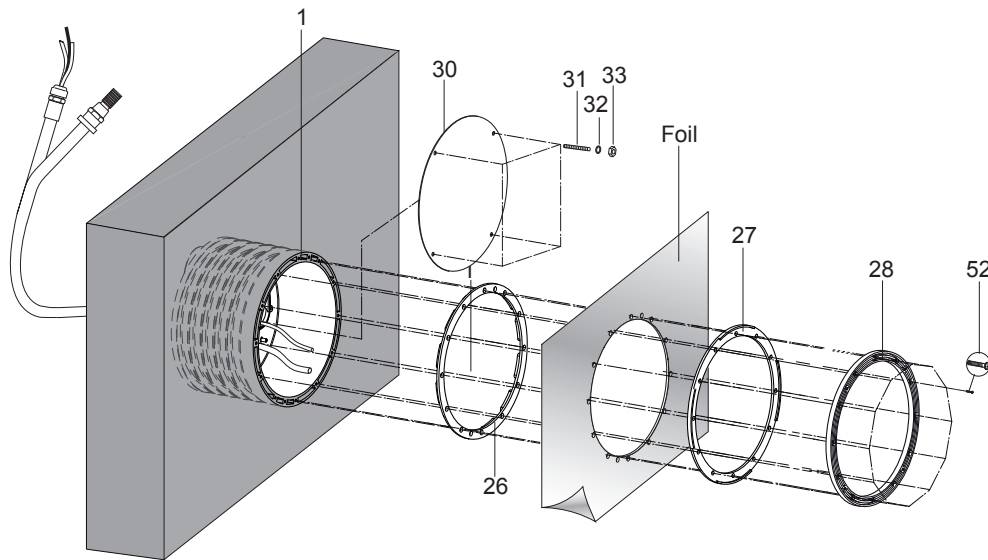


Figure 6
Installation formwork for concrete pool with a vinyl liner

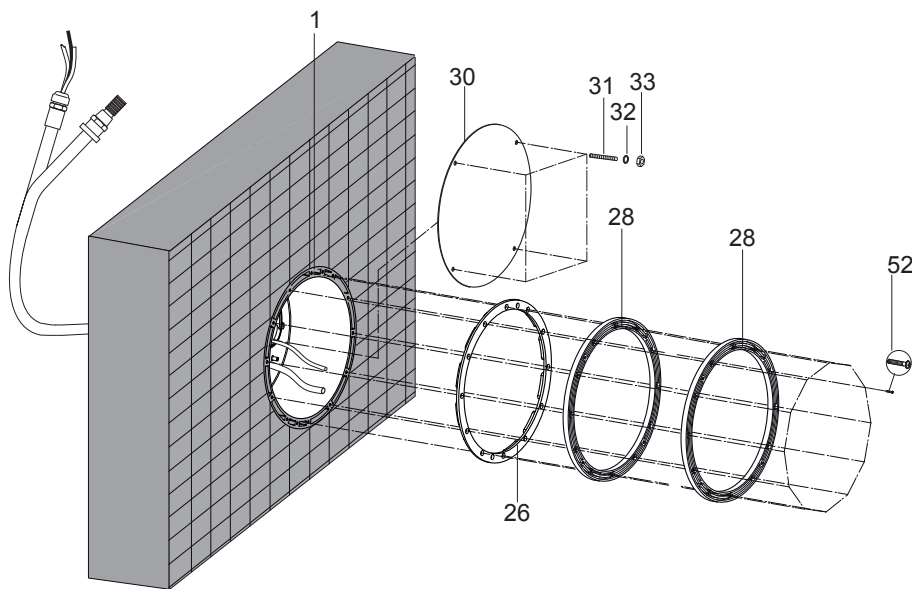


Figure 7
Installation formwork for a tile pool

Existing Concrete or Gunite Installation

Materials: (*NOT INCLUDED*)

- One (1) piece of plywood 2' x 3' x 1/4"
- Eight (8) Lag screws 1/4" x 1-1/2" (minimum)
- Eight (8) Plastic lag shield anchors

1. If needed, Pre-plumb BaduJet super-sport II jet housing:

- Install approximately 12" of 4" SCH 40 pipe to both suction and pressure connections on the jet housing. (*NOTE: If plumbing exceeds 30 ft. between the jet housing and pump, increase pipe size to 6". Install a 6" x 4" reducer coupling as close to the jet housing as possible.*)
- Install the air regulator hose and protective conduit to the back of the jet housing. (See Figure 10 and Step 1 in the Final Assembly section of this manual on page 16.)

Existing Concrete or Gunitite Installation - continued

2. Carefully, choose the location where the BaduJet super-sport II will be installed; it should be a flat surface with no or very little crown.

3. Using a concrete saw, cut out the outline of the section to be chiseled out with an air hammer or equal. This hole should be 19" wide by 19" **BELOW** the water line. The bonding rods on the cap of the pool should be left intact, while all other steel rods should be cut back to clear the placement of the jet housing.

4. Taking the 2' x 3' x 1/4" plywood, set its top edge even to the cap of the pool wall. In some cases a larger piece of plywood maybe needed to cover the hole completely. If plywood covers the hole completely, mark the water line on the plywood. From this line, layout and drill holes in plywood for the four (4) M8 x 80 gunitite cover studs (part# 31) and the eight (8) 1/4" lag screws. (See Figure 8)

5. Insert the four (4) M8 x 80 gunitite cover studs (part# 31) in the jet housing; one on each end of the vertical center line and one on each side on the horizontal center line insert gasket with knobs (part# 26). Place gunitite cover on studs covering the inside of the jet housing. Next place plywood on the studs and secure to the jet housing with four (4) M8 stud washers (part# 32) and four (4) M8 gunitite cover stud nuts (part# 33). The pressure connection should be located directly **ABOVE** the suction connection.

6. Now place this assembly into position in the pool wall and align the water line marks. With a level on the two (2) horizontal studs, level the assembly and mark the eight (8) holes for the 1/4" lag shield anchors. Remove assembly and drill holes for lag anchors. Install lag shield anchors. Reposition the assembly and secure it to the lag shield anchors with 1/4" lag screws. It is best to check with a level before tightening the lags down. Back fill and form the outside of pool wall.

7. Mix compound that is compatible and has a good bonding characteristics to the pool wall compound. Pour mixture into form. Use a mallet and lightly tap the front of formed assembly to settle mixture, and avoid any air bubbles in the pour. It should be filled to the top of the plywood. Let mix cure and then remove plywood from the housing assembly. Leave gunitite cover installed using M8 x 80 gunitite cover studs (part#31) with M8 stud washers (part# 32) and M8 gunitite cover stud nuts (part# 33) until pool wall is complete. Drill out plastic lag anchors and fill in the holes. Apply finish to pool wall (plaster, tile, paint, etc.). Remove the gunitite cover, gasket with knobs, and the gunitite cover screws.

NOTE: To avoid stress on the housing, the jet housing and 2 to 3 inches of plumbing stub out may be encased with gunitite or concrete.

8. Install the clamping ring (part# 28) based on your pool type:

- **Gunitite wall (no tile or liner):** Align the clamping ring (part# 28) as shown in Figure 9. Using the twelve (12) M8 x 30 clamping ring screws (part# 52), attach the clamping ring and handles to the jet housing.
- **For a concrete pool with vinyl liner:** Use the template in Figure 4 to mark and drill the holes through the liner (twelve (12) M8 holes and center 14" hole). Insert the gasket with knobs (part# 26) in the front of the jet housing. Install the liner with the holes aligned with the jet housing. Align the clamping ring (part# 28) as shown in Figure 9. Using the twelve (12) M8 x 30 clamping ring screws (part# 52), attach the clamping ring and handles to the jet housing. (See Figure 6)
- **In a tiled pool:** The tile thickness may be compensated with an additional clamping ring and longer clamping ring screws (optional parts). (See Figure 7)

9. Continue to Final Assembly Section on page 16.



CAUTION: Locate pressure connector directly **ABOVE** the suction connection. Pressure and suction connectors must be exactly vertical or the stainless steel handles will not align properly.

CAUTION: Center of the jet housing (the two jet nozzles) should be exactly 12" **BELOW** water level for maximum efficiency.

CAUTION: Gasket with knobs (part# 26) goes **BEHIND** pool wall.

CAUTION: Clamping ring gasket (part# 27) goes in **FRONT** of pool wall. A good RTV silicone may be used with gasket when mounting jet housing, but in most cases it is not necessary. Installer should decide whether or not silicone is necessary.

1. Cut 13.3" hole through pool wall. Ensure that the center of this hole is 12" **BELOW** the water level.
2. Using the template shown in Figure 11, mark and drill the twelve (12) M8 holes through the pool wall.
3. Insert the gasket with knobs (part# 26) in the front of the jet housing. Align the jet housing on the outside pool wall, making sure the pressure connector is directly **ABOVE** the suction connector.
4. Align the clamping ring gasket (part# 27) on the inside of the pool wall as shown in Figures 12 and 13. Be sure the ribs on the outer edge of the gasket are facing away from the pool wall and are positioned as shown.
5. Install the twelve (12) M8 x 30 clamping ring screws (part# 52).
6. Continue to Final Assembly Section on page 16.

Liner and/or Fiberglass Pool Installation - continued

NOTE: The gunite cover (part# 30), M8 x 80 studs (part# 31), 8.4mm washers (part# 32), and M8 nuts (part# 33) are used in those cases where the swimming pool is commissioned without the final assembly kit being installed.

CAUTION: All screws should be **HAND TIGHT**. **DO NOT** use drills or pneumatic tools. **DO NOT** over tighten!

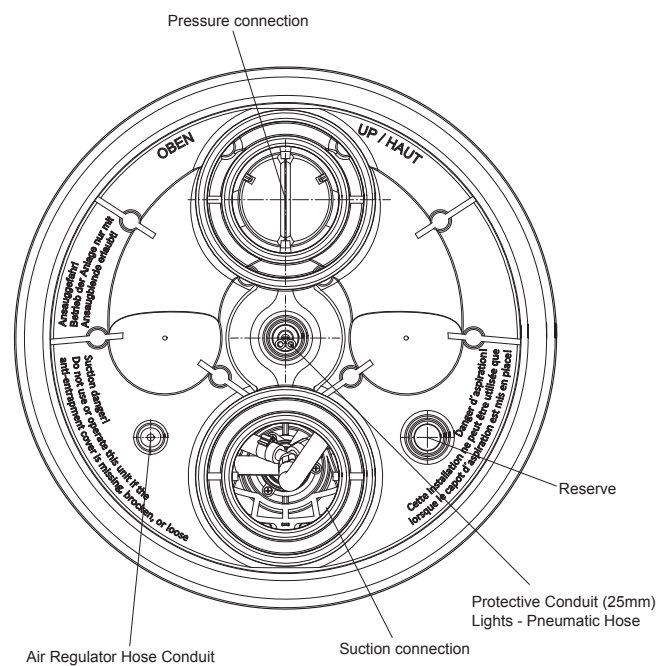
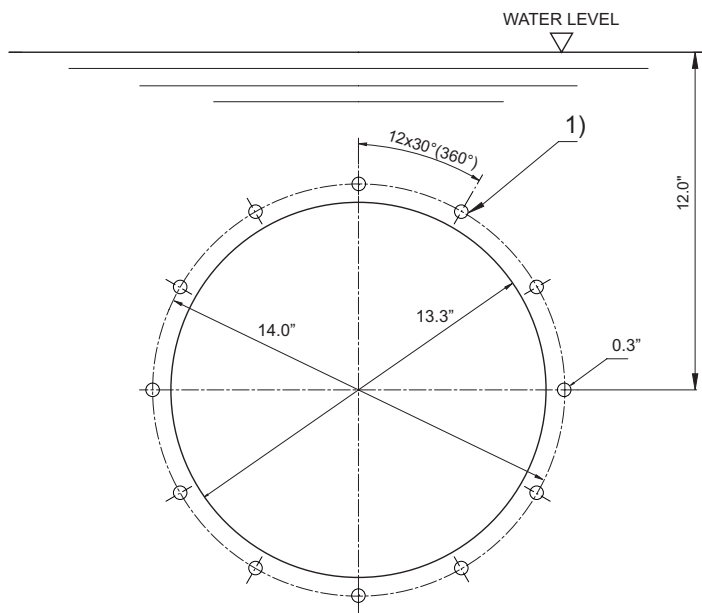


Figure 10
Rear View



1) Fasten to clamp ring (12x)

Figure 11
Template for fiberglass/vinyl liner pools

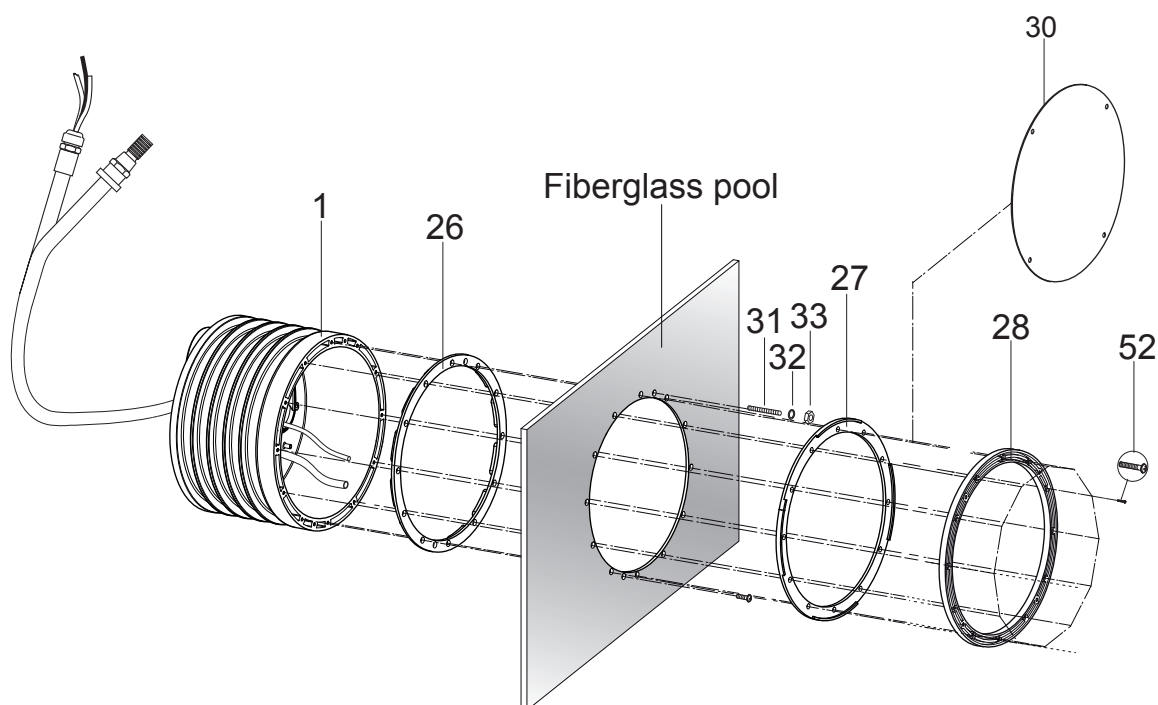


Figure 12

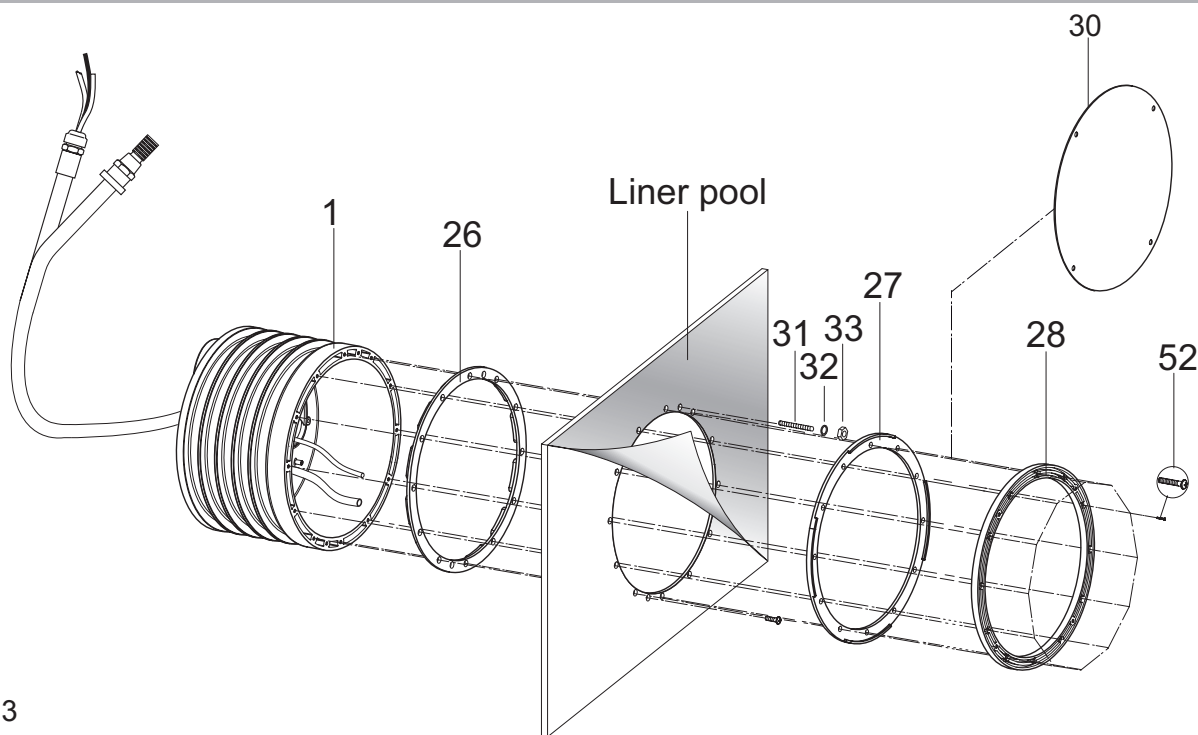


Figure 13

Final Assembly

Once installation of the jet housing has been completed:

1. Install air regulator hose and protective cable conduit using Figures 10 and 14:

- Glue the metric side of the M25 x 3/4" conduit connector (part #118) to the back of the jet housing. Install 3/4" Flexible or rigid PVC protective cable conduit to the 3/4" side of the conduit connector. Install the cable gland (part #20), o-ring (part #114), and 3/4" conduit adapter (part #115) at the control box and connect to the protective cable conduit.
- Glue the metric side of the M20 x 1/2" conduit connector (part #117) to the back of the jet housing. Install the air regulator hose to the back of the jet housing using 1/2" flexible PVC. Install the 1/2" check valve (part #101), o-ring (part #113), and 1/2" conduit adapter (part #116) at the end of the air regulator hose.

2. Insert the o-ring (part# 62) in the jet housing as shown in Figure 14.

3. Start the ten (10) nozzle housing tapping screws (part# 61) into the pre-assembled nozzle housing (part# 102.1). Place the nozzle housing at the main jet housing.

4. Feed the pneumatic hoses (part# 47) through the protective conduit as shown in Figure 14. Allow enough pneumatic hose to reach the control box and pneumatic buttons. Excess can be trimmed upon installation. Mark each end with a marker. (P = Pump & L = Light.)

5. Fasten the internal air line (part# 4) to the jet housing using the hose clamp (part# 9).

6. Route the pneumatic hoses through the pneumatic button openings of the nozzle housing. *NOTE: Light ON/OFF is on the left and the pump ON/OFF button is on the right.*

7. Align the complete nozzle housing to the main housing and fasten the ten (10) pre-assembled tapping screws. *All screws should be **HAND TIGHT**. **DO NOT** use drills or pneumatic tools. **DO NOT** over tighten!*

Final Assembly - continued

8. Place the rectangular cover (part# 93) against the clamping ring (part #28) and fasten with four (4) 8.4mm washers (part# 94) and four (4) M8 x 20 machine screws (part# 95) and cover the openings with the rectangular covers (part# 96). **All screws should be *HAND TIGHT*. DO NOT use drills or pneumatic tools. DO NOT over tighten!** Make sure the UP label is in the correct position (See Figure 15)

WARNING: For safety reasons it is imperative that the suction housing is mounted properly. If the suction housing is not mounted properly, the danger of injury through entrapment exists. All guarantee rights and claims for compensation are rendered invalid for damage resulting from contravention or faulty mounting.

9. Guide the pneumatic hoses through the two (2) bottom openings of the light cover (part# 110). **NOTE: Light ON/OFF is on the left and the pump ON/OFF button is on the right.** Align the light cover with the nozzle housing and fasten with four (4) self tapping screws (part# 112). (See Figure 16)

10. Slide one (1) o-ring (part# 37) onto each pneumatic button. Fasten the pneumatic hoses to the corresponding buttons using the hose clamps (part# 48). Insert the two (2) pneumatic buttons through the light cover and into the nozzle housing and lock them by turning them clockwise.

11. Mount the volume control knob (part# 21.1) and air regulator knob (part# 111) by means of a rubber mallet and a protective cloth. (See Figure 17)

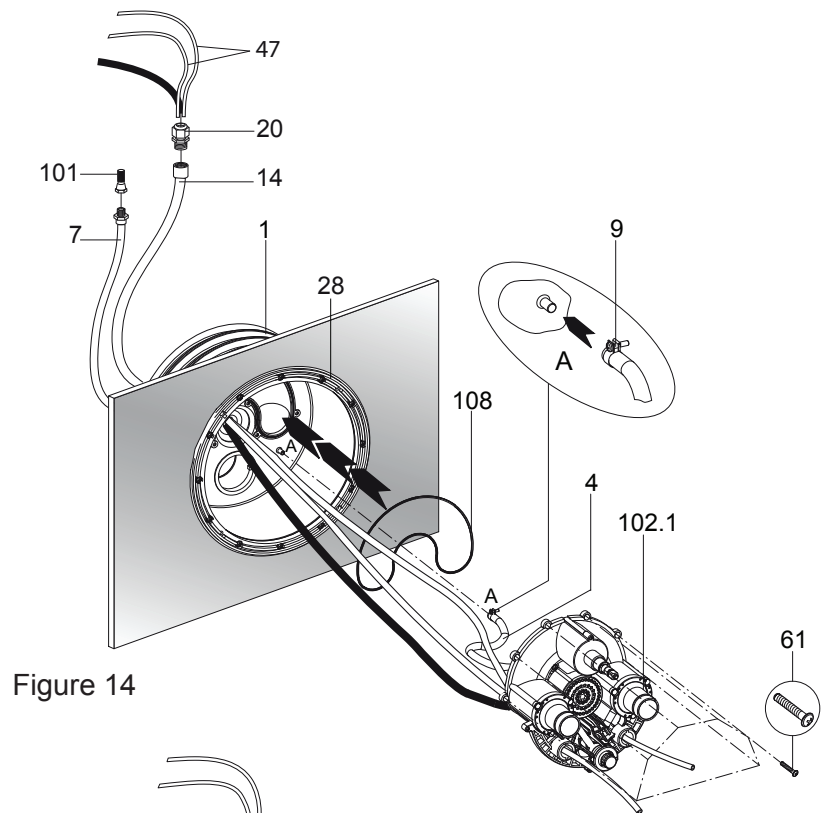


Figure 14

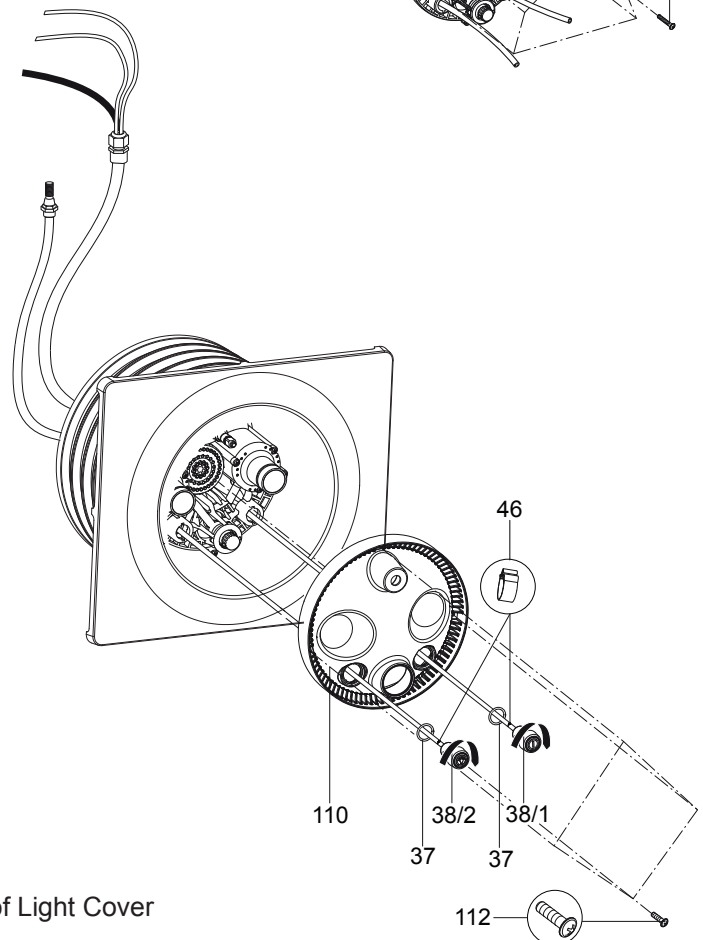


Figure 16
Installation of Light Cover

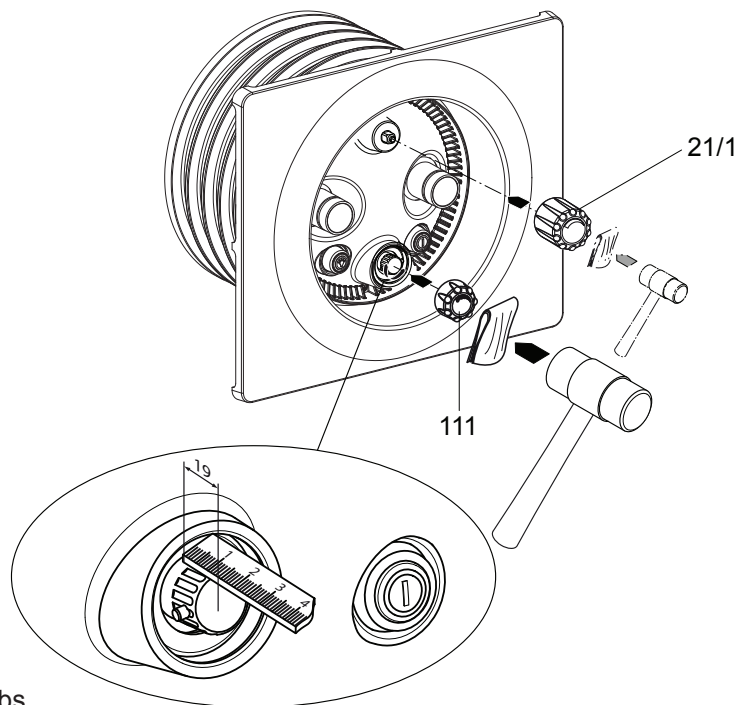


Figure 17
Installation of Knobs

12. Mount the volume control knob (part# 21.1) and air regulator knob (part# 111) by means of a rubber mallet and a protective cloth. (See Figure 17)

Electrical Installation

WARNING: The wiring of the pool motor and control box should be done by a licensed electrician in accordance with local codes. Be certain that the motor frame and control box are grounded. Motor name plate has voltage, phase, amp draw, and other motor information as well as wiring connection instructions.

This section concerns the electric motor and control box for the BaduJet super-sport II.

CAUTION: Before installing the Speck Pump, read the entire pump owner's manual found in the pump box.

Consult local codes for minimum distance between pump and pool. Locate pump as close to the pool as practical.

NOTE: There is 30 ft. of pneumatic tubing for the air buttons as well as 30 ft. of cable for the LED light included with the BaduJet super-sport II. The control box should be installed within this distance of the jet housing. If needed, the air buttons operate up to 50 ft.

BONDING: As required by the National Electrical Code, the electric pump motor must be electrically bonded to the pool structure (reinforced bars, etc.) by a solid copper conductor not smaller than No. 8 AWG. Bonding lug is provided on the electric pump motor.

GROUNDING: Permanently ground the pump motor and control box using a conductor of appropriate size.

- Pump Motor: Connect to the No. 10 green headed ground screw provided inside the motor terminal box.
- Control Box: Connect to the aluminum grounding terminal strip on the inside of the control box enclosure.

CAUTION: Do not connect to electric power supply until the unit is permanently grounded.

4 Operation

Operation

WARNING: **DO NOT** use or operate the BaduJet super-sport II if the anti-entrapment cover is missing, broken, or loose.

WARNING: To reduce the risk of injury, **DO NOT** permit children to use this product unless they are closely supervised at all times.

CAUTION: Consult your physician before attempting any strenuous exercise. ***This product may not be challenging or satisfying for all levels of exercise.***

Before starting the pump for the first time, open the valves completely and remove the red filler plug (Model 21-80) or strainer basket lid (all other pump models) and fill pump with water until the water is level with the suction inlet. Replace red filler plug or strainer basket lid, hand-tighten, and make sure the o-ring is not damaged. Push the ON/OFF pneumatic button located on the BaduJet super-sport II housing. For the first start-up allow five (5) minutes for the pump to prime. This will not damage the mechanical seal. Due to the large volume of air that can be present in the vertical portion of the suction above the water line, initial priming time may be longer than with regular pool filtration pumps. If the pump has not started priming after five (5) minutes, stop the pump, re-fill the pump body and restart.

The volume control knob enables the swimmer to regulate the volume of water released through the jets. Turn the unit OFF before turning volume control knob (Turn clockwise to reduce flow). The swivel nozzles of the BaduJet super-sport II can be positioned in various directions allowing swimmers to use various swim styles.

To start swimming, jogging or running it is suggested that the two nozzles are pointed slightly inward and slightly upward so that the water “breaks” approximately 4 ft. in front of the BaduJet super-sport II (See Section 5 Nozzle Adjustment). Start swimming with only minimal force in arms and legs until you feel yourself drifting backwards, then add force and swim upstream until a proper balance is found between force and endurance. Keep in mind that this unit is designed for a balanced workout. Find a pace that you can keep up for at least 20 minutes. Out pacing is always possible. The idea is to continue exercising for an extended period of time. Under certain conditions it is possible that the current “drifts off” to the left or the right from the middle due to water bouncing off the back wall. In the event that it interferes with your swimming action, turn the unit OFF for a few minutes and restart.

The air regulator knob permits a controlled mixture of air into the water flow and creates a unique, invigorating, bubble effect. It will also add additional resistance to swim against.

A pulsating massage hose can be attached to one of the nozzles for massages. Turn the BaduJet super-sport II OFF. Close the air regulator. Reduce the volume of water by turning the volume control knob clockwise, slide the cap (part # 84) onto one (1) of the jet nozzles and lock into place. Slide cap of massage hose (part# 89 or 89.1) onto the other nozzle and lock into place. Hold pulsator and turn the BaduJet super-sport II ON. Massage as advised by your physician.

Optional Accessory: The Badu Swim Mirror is a perfect addition to the BaduJet, this portable mirror is designed to be the perfect tool to help swimmers stay in the “swim lane”.



Figure 18
Badu Swim Mirror

5 Service and Maintenance

Nozzle Adjustment

When setting the nozzles for basic swimming, it is recommended that you set the nozzles in such a way that each nozzle intersects 4 feet away while breaking the surface at the same time. To help set the nozzles in a neutral position, please follow these instructions:

1. Parts required:
 - Quantity 2 SCH 40 PVC Pipe (4' x 1 1/2")
 - Quantity 2 PVC Couplings - (1 1/2" Slip x 1 1/2" Slip)
 - Quantity 2 PVC Hose Adaptor (1 1/2" Male x Hose)
2. Glue couplings and pipe.
3. Turn OFF the jet pump.
4. Slide each jet adjustment tool into jet nozzles.
5. Move each jet adjustment tool toward each other until each pipe touches at water level.
6. Remove jet adjustment tool.

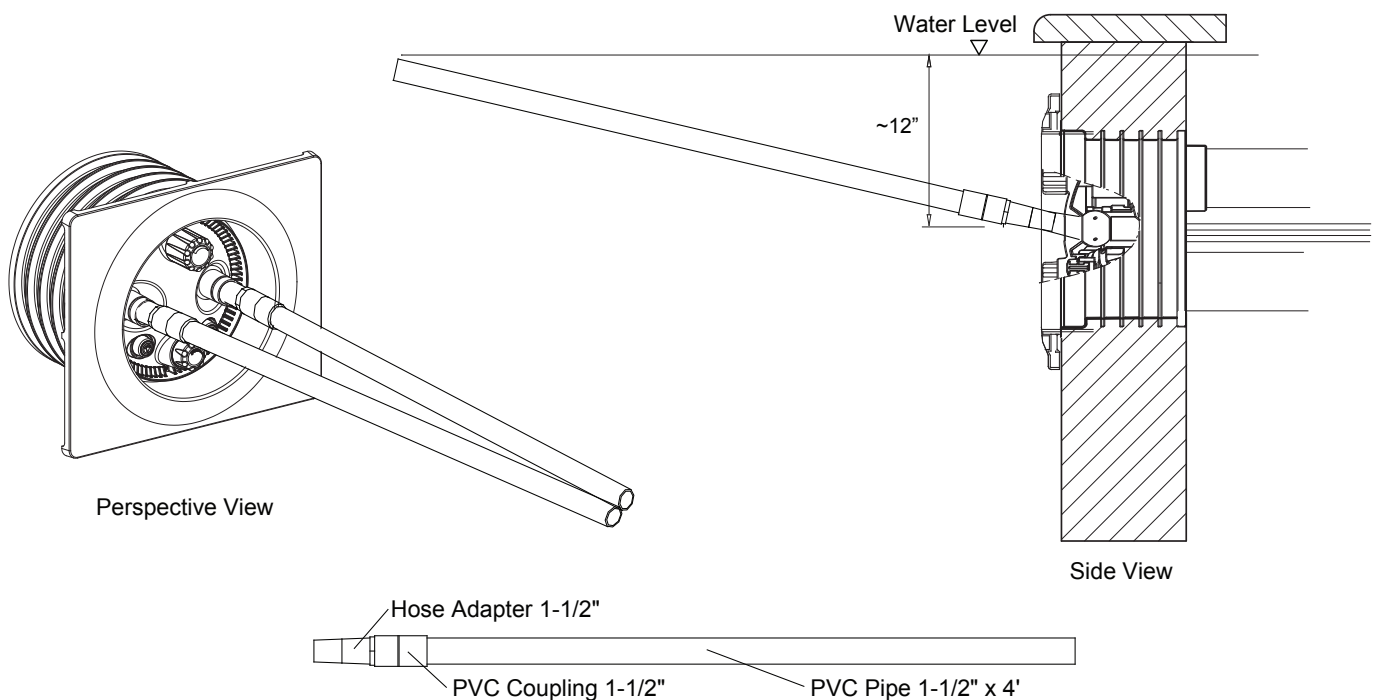


Figure 19
BaduJet Nozzle Adjustment

Winterizing

In areas subject to freezing water temperatures, you should protect your equipment. We recommend you purchase a winter cover kit part #113. This kit includes one (1) winter plate (part # 93.2), one (1) gasket (part # 29), four (4) washers (part # 94) and four (4) screws (part # 95). (See Figure 21)

Also, you can protect your swim jet system as follows: Drain pool until water level has dropped below the anti-entrapment cover. (See Figure 20) Then protect pump by removing drain plug and red filler plug (Model 21-80) or strainer basket lid (all other pump models).

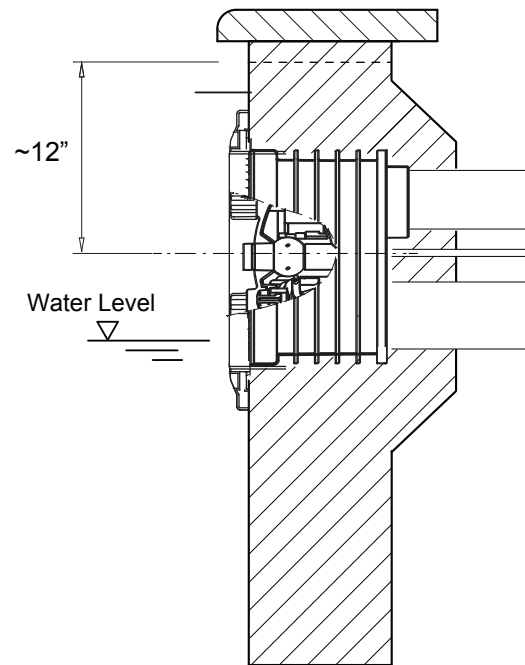


Figure 20
Water Level when winterizing

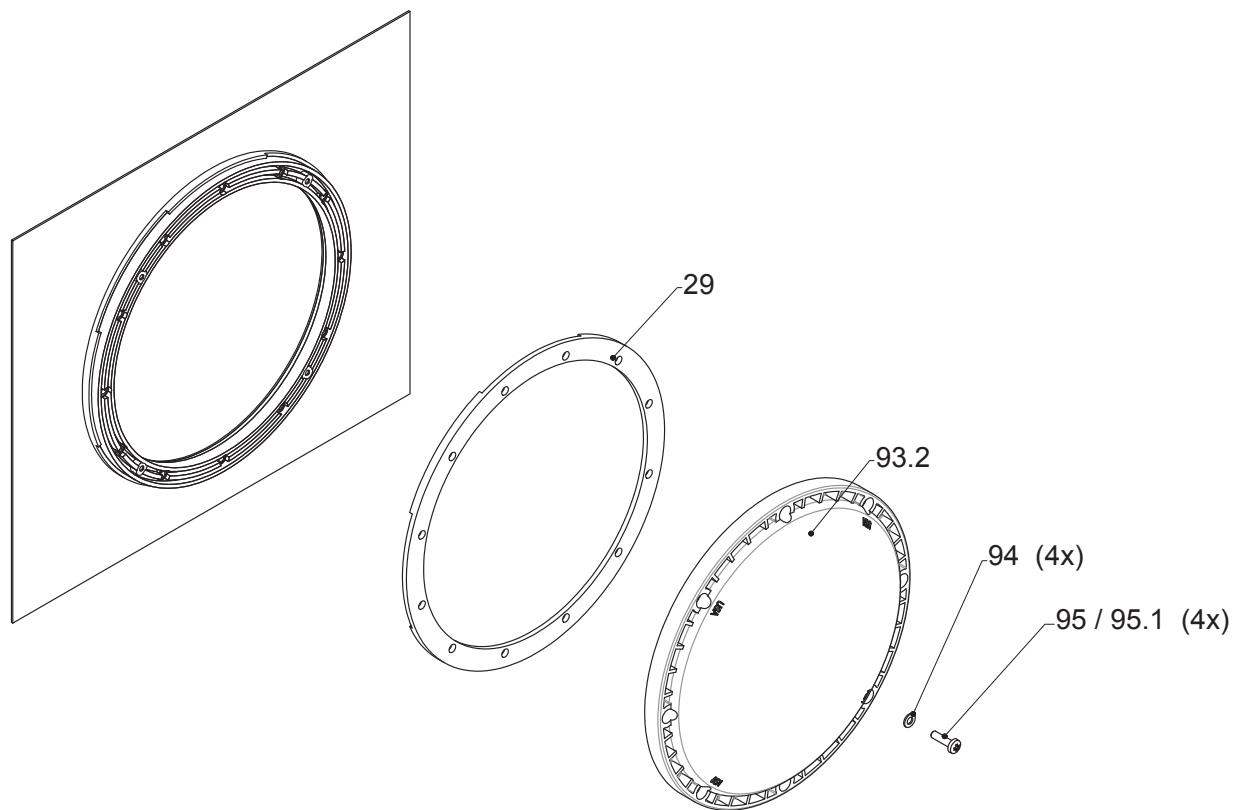


Figure 21
Winterizing Kit

6 Troubleshooting

Frequently Asked Questions

How is the current generated?

The pump generates up to 400 GPM coming out of two (2) jet nozzles at 27 ft.. per second and 36 ft.. per second thru one (1) nozzle creating a swim current in excess of 5700 GPM, measured 6 ft.. from the jet.

What size pool do I need?

The BaduJet super-sport *II* can be installed in any size pool. However, we recommend a minimum length of 14 ft.. and a minimum width of a 7 ft.. swimming lane.

What size plumbing is necessary? How far away from the BaduJet super-sport *II* can the pump be installed?

Use 4" plumbing for runs up to 30 ft. For runs longer than 30 ft. use 6" plumbing for the entire run. The pump can be placed as close to the BaduJet super-sport *II* as local codes will allow.

How many amps does the pump operate at?

Maximum 19.4 amps @ 230 V

What size breaker do I need?

You must use a 40 amp breaker for the 4 HP pump or 30 amp breaker for the 3 HP pump to avoid nuisance tripping.

Is the BaduJet super-sport *II* approved?

Yes. The BaduJet super-sport *II* swim jet system is listed by UL and complies with ASME A112.19.8-2007 and Addenda ASME A112.19.8b-2009 as well as ANSI/APSP-16 (2011). Canadian listed to ASME A112.18.1-2005/CSA B125.1-05, dated April 2007 and C22.2 No. 218.2-93, First Edition, dated April 2006, reaffirmed 2008.

Does it matter if the housing is installed higher or lower than the manual states?

Yes, the center of the jets must be 12" **BELOW** estimated water level for proper performance of unit.

Can the pump be placed below water level?

Yes. However, for best performance we recommend ordering a pump for flooded suction (Model 21-80/33 G) instead of self-priming (Model 21-80/33 GS). We recommend installing valves for ease of maintenance.

How far away can the air button function properly?

A maximum of 50 ft. Consult factory for distances over 50 ft.

Do I need to install a motor starter?

No. The pump has a built-in thermal overload.

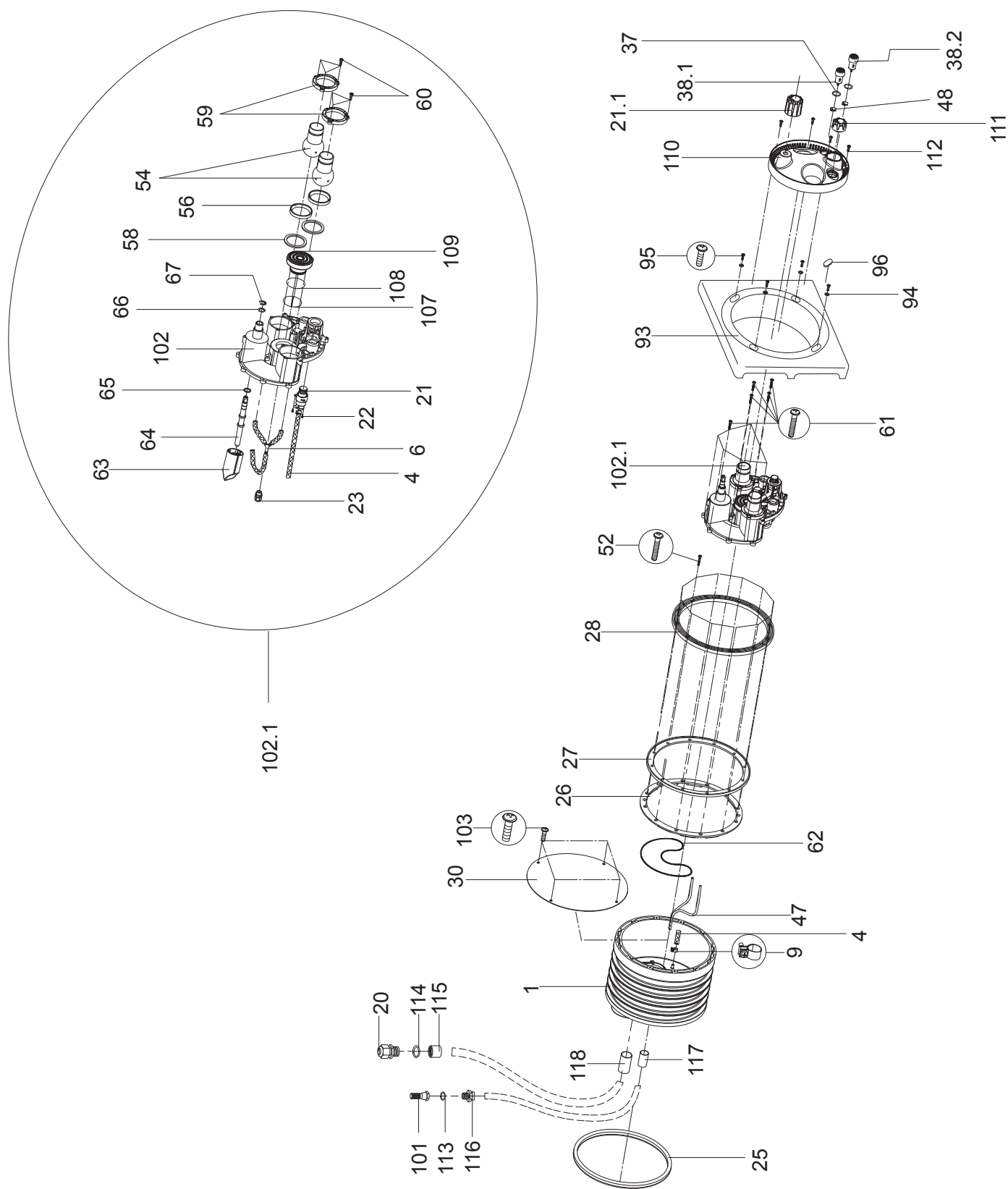
Should this be tied into my filter system?

No. The swim jet system and the filter system should not be plumbed together as they each provide very specific functions.

Can I use with automated controls?

Yes. The control box comes with the ability to tie into automated control systems or other switching devices.

7 Product Specification



Exploded View

PART NUMBER	DRAWING NUMBER	QTY	DESCRIPTION
2326000002	1	1	JET HOUSING
2301001007	4	3 FT	HOSE - AIR REGULATOR 8 x 3mm (PRICE PER FOOT)
2326000408	6	1	HOSE (3X) WITH Y- HOSE BARB
2301001008	9	2	CLAMP - HOSE, AIR REGULATOR 14/9 SS A4
2326000031	20	1	STRAIN RELIEF - LIGHT CABLE, 3/4" NPT
2321000409	21	1	AIR REGULATOR COMPLETE
2326000006	21.1	1	VOLUME CONTROL KNOB
5879812996	22	3	SCREW - AIR REGULATOR, 2.9 x 9.5
5882501619	23	1	STRAIN RELIEF - LIGHT CABLE, M16 x 1.5
2326000020	25	1	ROUND SEALING CORD
2301000026	26	1	GASKET WITH KNOBS - JET HOUSING
2326000021	27	1	GASKET - CLAMPING RING
2301000028	28	1	RING - CLAMPING
2301000030	30	1	GUNITE COVER
5805510880	31	4	STUD - GUNITE COVER M8 x 80mm
5809021080	32	4	WASHER - GUNITE COVER M8
5879340800	33	4	NUT - STUD - GUNITE COVER M8 A2
2326000014	37	2	O-RING PNEUMATIC BUTTONS 24 x 3mm
2321000401	38.1	1	PNEUMATIC BUTTON COMPLETE - PUMP
2321000404	38.2	1	PNEUMATIC BUTTON COMPLETE - LIGHTS
2300202060	47	2	AIR TUBING - LIGHT/PUMP 4 x 1.5mm (PRICE PER 10M)
2302001046	48	2	CLAMP - HOSE, PNEUMATIC BUTTON 6.8 - 8mm
5879860830	52	12	SCREW - CLAMPING RING, POZIDRIV/PAN M8 x 30mm A4
2302002954	54	2	NOZZLE - 40mm
2302002056	56	2	SEAT - NOZZLE
2302002057	58	2	SPACER - NOZZLE 6.2mm
2319800817	59	2	NOZZLE FLANGE
5879006023	60	6	TAPPING SCREW - BALL NOZZLE FLANGE, 6 x 22mm A4
5879006023	61	10	TAPPING SCREW - NOZZLE HOUSING, 6 x 22mm A4
2326000013	62	1	O-RING - NOZZLE HOUSING 257 x 3mm
2326000004	63	1	VOLUME CONTROL CYLINDER
2303002964	64	1	VOLUME CONTROL SPINDLE (COMPLETE)
2326000026	65	1	O-RING 15 x 4mm - SPINDLE
2302002065	66	2	WASHER - VOLUME CONTROL SPINDLE, 23 x 16.2 x 1.5mm
2302002067	67	1	RETAINER - SHAFT, VOLUME CONTROL SPINDLE
2302005236	93	1	COVER - RECTANGULAR
5871250800	94	4	WASHER - RECTANGULAR COVER 8.4mm A4
5879860820	95	4	BOLT - RECTANGULAR COVER, PHILLIPS M8 x 20mm
5879860880	95.1	4	BOLT - RECTANGULAR COVER, PHILLIPS M8 x 80mm
2302005237	96	4	PLUG - RECTANGULAR COVER
5030000105	101	1	VALVE - CHECK 1/2"
2326000003	102	1	HOUSING - NOZZLE
2326000402	102.1	1	HOUSING - NOZZLE COMPLETE
3932541201	107	1	O-RING - LIGHT 48 x 2mm
2607101019	108	1	O-RING - LIGHT 49 x 3.5mm
2326000037	109	1	LIGHT LED 12V AC - WHITE, 10M
2326000005	110	1	LIGHT COVER
2321000022	111	4	AIR REGULATOR KNOB
5879006023	112	1	TAPPING SCREW - LIGHT COVER, 6 x 22mm A4
2920141230	113	1	O-RING - CHECK VALVE, 19 X 3mm
2326000032	114	1	O-RING - STRAIN RELIEF
2326000034	115	1	ADAPTOR - STRAIN RELIEF, FEMALE, PVC 3/4"
2301001030	116	1	ADAPTOR - CHECK VALVE, MALE, PVC 1/2"
5862432021	117	1	CONNECTOR - AIR REGULATION LINE M20 x 1/2"
5862432531	118	1	CONNECTOR - CONDUIT M25 x 3/4"
2920280729	NOT SHOWN	1	CONTROL BOX BJC-7-GFCI+CP SSII

OPTIONAL PARTS

2326000037	109.1	1	LIGHT LED 12V AC - MULTICOLOR, 10M
2326000038	109.2	1	LIGHT LED 12V AC - BLUE, 10M
2326000010KI	NOT SHOWN	1	WINTER COVER KIT
2300003000	NOT SHOWN	1	MASSAGE HOSE 5 FT. WITH PULSATOR
2300003006	NOT SHOWN	1	MASSAGE HOSE 15 FT. WITH PULSATOR
2300022000	NOT SHOWN	1	CAP - NOZZLE, CLOSE OFF

8 Limited Warranty

Speck Pumps-Pool Products, Inc. grants solely to the original consumer purchaser ("Buyer") of the Badu® SwimJet System(s) the following personal, non-transferable and limited warranty on the following terms and conditions (the "Limited Warranty"): the Badu SwimJet System(s) is warranted to be free of material defects in materials or workmanship under normal use for a period of one (1) year beginning on the date of the Buyer's purchase of the Badu SwimJet System(s) (the "Limited Warranty Period"). Notwithstanding any provisions herein to the contrary, the warranties and obligations hereunder shall not in any event extend for more than two (2) years beyond the date of shipment of the Badu SwimJet System(s) from the factory (the "Limited Warranty Period"). The Limited Warranty is subject to each of the following additional terms and conditions:

1. IN THE EVENT OF ANY BREACH OF THE LIMITED WARRANTY, SPECK PUMPS-POOL PRODUCTS, INC.'S ENTIRE OBLIGATION AND LIABILITY TO BUYER, AND BUYER'S SOLE AND EXCLUSIVE REMEDY SHALL BE AS FOLLOWS:

Speck Pumps-Pool Products, Inc. will, at its option, either repair or replace the Badu SwimJet System(s) or refund to Buyer the purchase price actually paid by Buyer for the Badu SwimJet System(s) subject to the Limited Warranty. Speck Pumps-Pool Products, Inc. shall have no obligations under the Limited Warranty unless Buyer delivers timely written notice to Speck Pumps-Pool Products, Inc. of the Limited Warranty claim within the Limited Warranty Period and returns the Badu SwimJet System(s) to Speck Pumps-Pool Products, Inc. if requested. To the fullest extent permitted by law, Speck Pumps-Pool Products, Inc. expressly disclaims any liability for, and the Limited Warranty does not include or cover, any labor, costs or other expenses in connection with the removal, transportation, shipment, insurance, replacement, repair, or installation of repaired or replaced parts or for any other costs or expenses or damages to property or things including, but not limited to, those arising in connection with the use of, or inability to use, the Badu SwimJet System(s).

2. To the fullest extent permitted by law, the Limited Warranty will be void and of no force or effect and Speck Pumps-Pool Products, Inc. will have no liability, responsibilities or obligations to Buyer or with respect to the Badu SwimJet System(s) in the event of the occurrence of any one or more of the following:

- (a) Any damage to the Badu SwimJet System(s) caused by Buyer, any third party, ground movement, other natural forces, acts of God or any other sources or causes not arising from a breach of the Limited Warranty, excluding ordinary wear and tear;
- (b) Any replacement, modification, alteration or repair of any parts or components of the Badu SwimJet System(s) by anyone other than Speck Pumps-Pool Products, Inc.;
- (c) Any abuse, misuse, accident, tampering with, improper installation or modification of the Badu SwimJet System(s) or any other actions, inactions or failures to act that violate the terms and conditions of this Limited Warranty;
- (d) Buyer's failure or inability to present an invoice, bill, receipt or other documentation clearly evidencing that the Badu SwimJet System(s) was installed and maintained in strict compliance with this Limited Warranty and that the claim was timely submitted within the Limited Warranty Period; and/or
- (e) Buyer's failure to comply with the conditions and contingencies set forth in paragraph 3 below.

3. The Limited Warranty is expressly conditioned and contingent upon Buyer's strict compliance with each of the following:

- (a) Installation of the Badu SwimJet System(s) by an experienced and qualified pool industry professional and a licensed electrician who is licensed within the jurisdiction in which the Badu SwimJet System(s) is installed and will be used; and
- (b) Buyer's operation and maintenance of the Badu SwimJet System(s) in strict accordance with Speck Pumps-Pool Products, Inc.'s printed operator/maintenance manuals delivered with the Badu SwimJet System(s).

4. DISCLAIMER: THE LIMITED WARRANTY IS THE ONLY WARRANTY MADE AND IS IN LIEU OF ALL OTHER WARRANTIES, AND ANY AND ALL IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, THE IMPLIED WARRANTY AGAINST INFRINGEMENT, AND THE IMPLIED WARRANTY OR CONDITION OF FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY LIMITED IN THEIR SCOPE AND DURATION TO THE ONE YEAR TERM OF THE LIMITED WARRANTY SET FORTH HEREIN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO THE BUYER.

Limited Warranty - continued

5. TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT SHALL SPECK PUMPS-POOL PRODUCTS, INC. OR ITS OFFICERS, DIRECTORS, EMPLOYEES, SHAREHOLDERS, AGENTS, OR REPRESENTATIVES BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES OR LOSS, INCLUDING TIME, MONEY, GOODWILL, AND LOST PROFITS IN ANY WAY WHICH MAY ARISE HEREUNDER OR FROM THE USE OF OR INABILITY TO USE THE BADU SWIMJET SYSTEM(S) OR THE PERFORMANCE OR NONPERFORMANCE OF ANY OBLIGATION UNDER THIS LIMITED WARRANTY. THIS PARAGRAPH, THE WARRANTY DISCLAIMERS IN PARAGRAPH 4 ABOVE, AND THE SOLE AND EXCLUSIVE REMEDY SET FORTH IN PARAGRAPH 1 ABOVE SHALL APPLY EVEN IF SPECK PUMPS-POOL PRODUCTS, INC. HAS BEEN NOTIFIED OF THE POSSIBILITY OR LIKELIHOOD OF SUCH DAMAGES OCCURRING, WHETHER SUCH LIABILITY IS BASED ON CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, PRODUCTS LIABILITY OR OTHERWISE, AND EVEN IF ANY REMEDY STATED HEREIN FAILS OF ITS ESSENTIAL PURPOSE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF SPECIAL, INDIRECT, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES OR LOSS, SO THE ABOVE EXCLUSIONS AND LIMITATIONS MAY NOT APPLY.

6. This Limited Warranty gives the Buyer specific legal rights, and the Buyer may also have other rights, which vary from state to state.

7. A return merchandise authorization ("RMA") must be obtained from Speck Pumps-Pool Products, Inc. before returning any product. Products returned without an RMA will be refused and returned, unopened, to the Buyer. All returned products are to be sent freight prepaid and insured for Buyer's protection to the manufacturer at 8125 Bayberry Road, Jacksonville, Florida 32256 USA. Under no condition will products be accepted after the expiration of the Limited Warranty Period. Speck Pumps-Pool Products, Inc. shall not bear any costs or risks incurred by Buyer in shipping a defective Badu SwimJet System(s) to Speck Pumps-Pool Products, Inc. or in shipping a repaired or replaced Badu SwimJet System(s) to Buyer.

Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

